

Evaluation of the Effect of Blood Transfusion on Retinopathy of Prematurity at a Tertiary Care Center in Western Saudi Arabia

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Introduction

In the neonatal intensive care unit (NICU), premature infants are very likely to develop anemia and require the transfusion of at least one unit of RBCs. The smaller the infants, the more likely the requirement for frequent transfusion.



We aim to study if there is an association between blood transfusions and the development and severity of retinopathy of prematurity (ROP). We also aim to explore the association with other clinical outcomes.

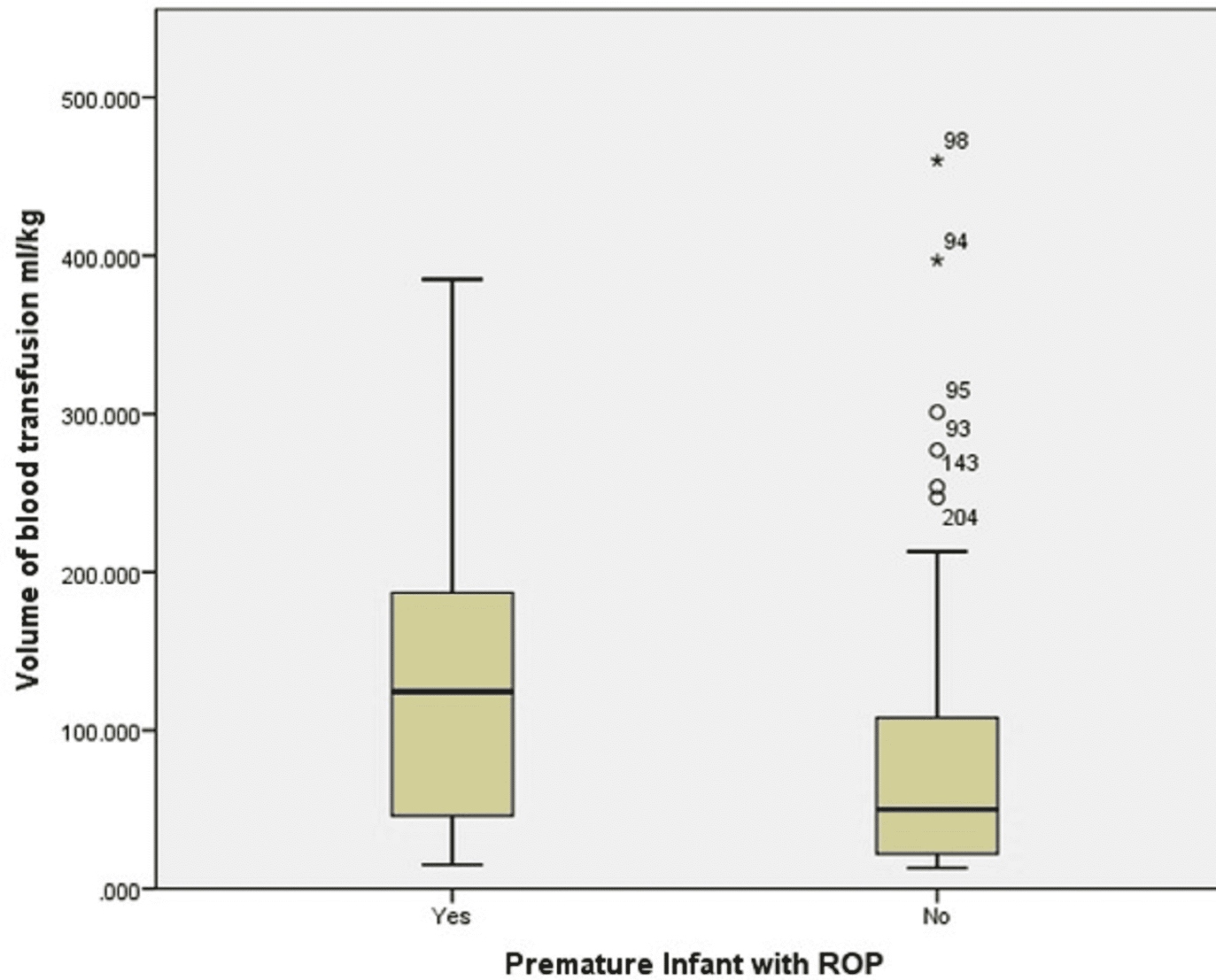


Method

A cohort of 291 infants admitted to our neonatal intensive care unit (NICU) was retrospectively analyzed. The number and volume of RBC transfusions on Day 7 and Day 30 were recorded. Clinical outcomes including ROP, necrotizing enterocolitis (NEC), bronchopulmonary dysplasia (BPD), and sepsis were noted.

Result

One hundred and eighteen infants were transfused at a median of nine days post GA. Compared to non-transfused infants, those who were transfused had a lower GA, a lower BW, a longer stay in the NICU, and received significantly more artificial ventilation. These infants also had a higher number of comorbidities, including sepsis and intraventricular hemorrhage. The number and volume of RBCs at Day 30 were significantly higher in infants with any stage of ROP than in those without ROP.



Conclusion

A higher frequency and volume of RBC transfusion were associated with an increased risk of ROP development. Whether this is a direct consequence of blood transfusion or the infants being at risk due to prematurity or low BW remains to be determined.



Thank you

